



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/796,752	02/06/1997	KOJI ARAI	614.1804/HJS	9335

21171 7590 12/05/2001

STAAS & HALSEY LLP  
700 11TH STREET, NW  
SUITE 500  
WASHINGTON, DC 20001

[REDACTED] EXAMINER

NGUYEN, PHUONGCHAU BA

[REDACTED] ART UNIT

[REDACTED] PAPER NUMBER

2663

DATE MAILED: 12/05/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	08/796,752	ARAI, KOJI	
	<b>Examiner</b>	<b>Art Unit</b>	
	Phuongchau Ba Nguyen	2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on RCE 10-22-2001.
- 2a) This action is FINAL.                  2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 3-5,8,9,11,12,20 and 21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 3-5,8,9,11 and 12 is/are allowed.
- 6) Claim(s) 20-21 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a)  The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "radio signals are received *in parallel* by said terminal" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 20-21 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The new matter is that "said radio signals are received *in parallel* by said terminal".

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 20 recites the limitation "said first signals" in line 4. There is insufficient antecedent basis for this limitation in the claim. Likewise, claim 21 recites the limitation "said first signals" in line 4 and "said N signals" in line 7.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Alexis [4,385,381].

The admitted prior art discloses in figure 1 a plurality of base stations [1-n] connecting to an ATM hub which is connected to wiring LAN system. These base stations simultaneously transmit data received (input signal) from ATM hub to a terminal station in different frequencies [f1-fn].

The admitted prior art does not explicitly disclose time-divisionally dividing an input signal to a first N signals; converting the first N signals into second N signals wherein a rate of the second N signals is lower than of the first N signals.

Alexis discloses in figure 1 a serial to parallel converter 14 (as claimed time-divisionally dividing unit) for time-divisionally dividing an input signal at rate 2.048 Mbps into first 512 signals (as claimed first N signals) at 4 kbps {see col.3, lines 45-59}. Although Alexis does not disclose another serial to parallel converter (as claimed converting unit) for converting the first N signals at 4 kbps into a lower rate second N signals. But it would have been obvious to a skilled artisan to add a duplicated serial to

parallel converter 14 for a multiple effect {St.regis Paper Co. v. Bemis Co., Inc., 193 USPQ 8 (7<sup>th</sup> Cir. 1977)}.

Therefore, it would have been obvious to a skilled artisan to implement the plurality of serial to parallel converters 14 as disclosed by Alexis into the line between the base stations [1-n] and the ATM hub of the admitted prior art. The motivation is to improve the transmission rate by transmitting data at a low bit rate between the base station and the ISDN system [i.e., ATM] for avoiding interference, fading and improving signal quality in reception as explicitly suggested by Alexis in column 1 lines 32-59.

***Allowable Subject Matter***

8. Claims 3-5, 8-9, 11-12 are allowable over prior art of the record.

***Response to Arguments***

9. Applicant's arguments with respect to claims 20-21 have been considered but are moot in view of the new ground(s) of rejection.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuongchau Ba Nguyen whose telephone number is (703) 305-0093 and available Monday-Friday from 10:00 AM to 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen, can be reached on (703) 308-5340. The fax number for this group is (703)305-9509.

Application/Control Number: 08/796,752  
Art Unit: 2663

Page 5

Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 305-4700.

*pn*

P. NGUYEN

November 29, 2001

*Melvin Marcelo*

MELVIN MARCELO  
PRIMARY EXAMINER